

PAPERS BY AT&T BELL LABORATORIES AUTHORS

COMPUTING/MATHEMATICS

- Graham M. H., Yannakakis M., **Independent Database Schemas**. *J Comput Sy* 28(1): 121-141, 1984.
- Heyman D. P., Whitt W., **The Asymptotic Behavior of Queues With Time-Varying Arrival Rates**. *J Appl Prob* 21(1): 143-156, 1984.
- Johnson D. S., Klug A., **Testing Containment of Conjunctive Queries Under Functional and Inclusion Dependencies**. *J Comput Sy* 28(1): 167-189, 1984.
- Johnson D. S., **The NP-Completeness Column—an Ongoing Guide**. *J Algorithm* 5(1): 147-160, 1984.
- Landwehr J. M., Pregibon D., Shoemaker A. C., **Graphical Methods for Assessing Logistic-Regression Models**. *J Am Stat A* 79(385): 61-71, 1984.
- Massey W. A., **Open Networks of Queues—Their Algebraic Structure and Estimating Their Transient Behavior**. *Adv Appl P* 16(1): 176-201, 1984.
- Ott T. J., **On the M/G/1 Queue With Additional Inputs**. *J Appl Prob* 21(1): 129-142, 1984.
- Sethi R., **Preprocessing Embedded Actions**. *Software* 14(3): 291-297, 1984.
- Witsenhausen H. S., Wyner A. D., **On Storage Media With Aftereffects**. *Inf Contr* 56(3): 199-211, 1983.
- Zaniolo C., **Database Relations With Null Values**. *J Comput Sy* 28(1): 142-166, 1984.

ENGINEERING

- Aumiller G. D., **Infrared Dye Laser in the 685-880-nm Range (Letter)**. *Appl Optics* 23(5): 651, 1984.
- Avanessians A. A., Beck E. C., Corcoran G. T., Eldumiati I. I., Elward J. P., Glaser A. B., Irving R. H., Spiwak R. R., Wiederhold R. P., **A VLSI Link-Level Controller**. *ISSCC Diges* 27: 196-197, 1984.
- Barnes Y. et al., **Cross-Coupled Phase-Locked Loop With Closed-Loop Amplitude Control (Letter)**. *IEEE Commun* 32(2): 195-199, 1984.
- Bonyhard P. I., Ekholm D. T., Hagedorn F. B., Muehler D. J., Nelson T. J., Roman B. J., **Characterization of 8- μ m Period Half-Megabit Ion-Implanted Memory Chip Designs**. *IEEE Magnet* 20(1): 129-134, 1984.
- Capasso F., Alavi K., Cho A. Y., Hutchinson A. L., **Electroabsorption $Al_{0.48}In_{0.52}As$ p-i-n Avalanche Photodiodes Grown by Molecular-Beam Epitaxy**. *IEEE Elec D* 5(1): 16-17, 1984.
- Chang T. L., Fisher P. D., **High-Speed Normalization and Rounding Circuits for Pipelined Floating-Point Processors**. *IEEE Acoust* 31(6): 1403-1408, 1983.
- Geary J. M., Vella-Coliero G. P., **Cryogenic Wafer Prober for Josephson Devices**. *IEEE Magnet* 19(3): 1190-1192, 1983.
- Geballe T. H., **The Science of Useful Superconductors—and Beyond**. *IEEE Magnet* 19(3): 1300-1307, 1983.
- Gilbert J. A. et al., **Ultra Low-Frequency Holographic Interferometry Using Fiber Optics**. *Opt Laser E* 5(1): 29-40, 1984.
- Hong M. et al., **Multifilamentary Nb-Nb₃Sn Composite by Liquid Infiltration Method—Superconducting, Metallurgical, and Mechanical Properties**. *IEEE Magnet* 19(3): 912-916, 1983.
- Jackson S. A., Fulton T. A., **The Effect of Quantum-Mechanical Uncertainty on Punchthrough Probability in a Josephson Junction**. *IEEE Magnet* 19(3): 1143-1146, 1983.
- Kelkar S. S., Lee F. C., **Adaptive Input Filter Compensation for Switching Regulators**. *IEEE Aer El* 20(1): 57-66, 1984.
- Kelkar S. S., Lee F. C., **Stability Analysis of a Buck Regulator Employing Input Filter Compensation**. *IEEE Aer El* 20(1): 67-77, 1984.

- Kohl P. A., D'Asaro L. A., Wolowodiuk C., Ostermayer F. W., **Photoelectrochemical Plating of Via GaAs-FET's**. IEEE Elec D 5(1): 7-9, 1984.
- Korotky S. K., Alferness R. C., Joyner C. H., Buhl L. L., **14 Gbits/s Optical Signal Encoding for $\lambda = 1.32 \mu\text{m}$ With Double Pulse Drive of a Ti: LiNbO₃ Waveguide Modulator**. Electr Lett 20(3): 132-133, 1984.
- Levinson S. E., **Some Experiments With a Linguistic Processor for Continuous Speech Recognition**. IEEE Acoust 31(6): 1549-1556, 1983.
- Marcuse D., Lee T. P., **Rate-Equation Model of a Coupled-Cavity Laser**. IEEE J Q El 20(2): 166-176, 1984.
- Pei S. S., Nakahara S., Schreiber H., Gates J. V., **Microstructures of Lead Alloy Josephson Junction Electrode Materials: PblnAu and PbSb**. IEEE Magnet 19(3): 972-975, 1983.
- Picinbon B., Bouvet M., Kadota T., **(Fr) Detection of a Deterministic Signal After Random Reflections**. Ann Telecom 38(7-8): 287-296, 1983.
- Ross D. G., Paski R. M., Ehrenberg D. G., Eckton W. H., Moyer S. F., **A Regenerator Chip Set for High-Speed Digital Transmission**. ISSCC Diges 27: 240+, 1984.
- Rutledge J. E., Dynes R. C., Narayanamurti V., **Superconducting Tunneling in a Pair-Breaking Microwave Field**. J L Temp Ph 54(5-6): 547-554, 1984.
- Sabnis A. G., **Characterization of Annealing of Co⁶⁰ Gamma-Ray Damage at the Si/SiO₂ Interface**. IEEE Nucl S 30(6): 4094-4099, 1983.
- Swartz R. G., Chin G. M., Voshchenkov A. M., Ko P., Wooley B. A., Finegan S. N., Bosworth R. H., **Digital NMOS Test Circuits Fabricated in Silicon MBE**. IEEE Elec D 5(2): 29-31, 1984.
- Swartzlander E. E., Young W. K. W., Joseph S. J., **A VLSI Delay Commutator for FFT Implementation**. ISSCC Diges 27: 266+, 1984.
- Tsang W. T., Olsson N. A., Linke R. A., Logan R. A., **1.5 μm Wavelength GaInAsP C³ Lasers: Single-Frequency Operation and Wideband Frequency Tuning**. Electr Lett 19(11): 415-417, 1983.
- Vandover R. B., Bacon D. D., **Properties of NbN/Pb Josephson Tunnel Junctions**. IEEE Magnet 19(3): 951-953, 1983.
- Lucky R. W., **The Office of the Future**. Chemtech US 14(3): 135-137, 1984.

MANAGEMENT/ECONOMICS

- Lucky R. W., **The Office of the Future**. Chemtech US 14(3): 135-137, 1984.

PHYSICAL SCIENCES

- Aeppli G. et al., **Spin Correlations Near the Ferromagnetic-to-Spin-Glass Cross-over**. J Appl Phys 55(6): 1628-1633, 1984.
- Boring J. W., Johnson R. E., Reimann C. T., Garret J. W., Brown W. L., Marcantonio K. J., **Ion-Induced Chemistry in Condensed Gas Solids**. Nucl Instru 218(1-3): 707-711, 1983.
- Boutique J. P., Riga J., Verbist J. J., Delhalle J., Fripiat J. G., Haddon R. C., Kaplan M. L., **Electronic Structure of 3,7-Diphenyl- and 3,7-Bis(dimethylamino)-1,5-dithia-2,4,6,8-tetrazocines: Ab Initio Calculations and Photoelectron Spectra**. J Am Chem S 106(2): 312-318, 1984.
- Brand H. R., Cladis P. E., **Smectic-X—the First Truly Ferroelectric Liquid Crystal**. J Phys. Lett 45(5): L217-L222, 1984.
- Brand H. R., Pleiner H., **Macroscopic Dynamics of Chiral Smectic-C**. J Physique 45(3): 563-573, 1984.
- Buck T. M., Wheatley G. H., Jackson D. P., **Quantitative Analysis of First and Second Surface Layers by LEIS (TOF)**. Nucl Instru 218(1-3): 257-265, 1983.
- Carlson N. W., Geschwind S., Devlin G. E., Batlogg B., Dillon J. F., Rupp L. W., **Spin-Flip Raman-Scattering in Eu_{0.54}Sr_{0.46}S**. J Appl Phys 55(6): 1679-1681, 1984.
- Cava R. J., Fleming R. M., Rietman E. A., **Diffuse X-Ray Scattering Study of Single-Crystal Alpha-Agl**. Sol St Ion 9-10(Dec): 1347-1351, 1983.
- Chen C. H., **Electron-Diffraction Study of the Charge-Density Wave Superlattice in 2H-NbSe₂**. Sol St Comm 49(7): 645-647, 1984.
- Chen H. S., Sherwood R. C., Jin S., Chi G. C., Inoue A., Masumoto T., Hagiwara H.,

- Mechanical Properties and Magnetic Behavior of Deformed Metal Glass Wires.** J Appl Phys 55(6): 1796-1798, 1984.
- Chin A. K., Chen F. S., Ermanis F., **Failure Mode Analysis of Planar Zinc-Diffused In_{0.53}Ga_{0.47}As p-i-n Photodiodes.** J Appl Phys 55(6): 1596-1606, 1984.
- Dillon J. F., Albiston S. D., Batlogg B., Schreiber H., **Domain Observation in Ferromagnetic and Reentrant Eu_xSr_{1-x}S.** J Appl Phys 55(6): 1673-1675, 1984.
- Downey P. M., Schwartz B., **Picosecond Photoresponse in ³He⁺ Bombarded InP Photoconductors.** Appl Phys L 44(2): 207-209, 1984.
- Dubois L. H., Schwartz G. P., Camley R. E., Mills D. L., **Inelastic Scattering of Electrons From Ionic Crystals With a Highly Conducting Overlayer.** Phys Rev B 29(6): 3208-3216, 1984.
- Fischer-Colbrie A., Fuoss P. H., **X-Ray RDF Analysis of 1500 Å Thick Amorphous Films.** J Non-Cryst 59-6(Dec): 859-862, 1983.
- Fisk Z., Thompson J. D., Lawrence J. M., Smith J. L., Batlogg B., **Phase Diagram and Critical Points of Ce Alloys.** J Appl Phys 55(6): 1921-1924, 1984.
- Forrest S. R., Kaplan M. L., Schmidt P. H., **Organic-on-Inorganic Semiconductor Contact Barrier Diodes. 1. Theory With Applications to Organic Thin Films and Prototype Devices.** J Appl Phys 55(6): 1492-1507, 1984.
- Fratello V. J., Wolfe R., Blank S. L., Nelson T. J., **High Curie-Temperature Drive Layer Materials for Ion-Implanted Magnetic-Bubble Devices.** J Appl Phys 55(6): 2554-2556, 1984.
- Garcia Iniguez L., Powers L., Chance B., Sellin S., Mannervik B., Milovan A. S., **X-Ray Absorption Studies of the Zn²⁺ Site of Glyoxalase I.** Biochem 23(4): 685-689, 1984.
- Gerhardmulhaupt R. et al., **Investigation of Piezoelectricity Distributions in Poly(vinylidene Fluoride) by Means of Quartz-Generated or Laser-Generated Pressure Pulses.** J Appl Phys 55(7): 2769-2775, 1984.
- Geschwind S., Devlin G. E., Dillon J. F., Batlogg B., Maletta H., **Elastic Light-Scattering From the Reentrant Spin-Glass Eu_xSr_{1-x}S.** J Appl Phys 55(6): 1676-1678, 1984.
- Gibson J. M., McDonald M. L., **A Simple Liquid-He-Cooled Specimen Stage for an Ultrahigh Resolution Transmission Electron Microscope.** Ultramicros 12(3): 219-222, 1984.
- Gottscho R. A., Burton R. H., Flamm D. L., Donnelly V. M., Davis G. P., **Ion Dynamics of RF Plasmas and Plasma Sheaths—a Time-Resolved Spectroscopic Study.** J Appl Phys 55(7): 2707-2714, 1984.
- Heaven M., Miller T. A., Bondybyev V. E., **Chemical Formation and Spectroscopy of S₂ in a Free Jet Expansion.** J Chem Phys 80(1): 51-56, 1984.
- Heinekamp S., Pelcovits R. A., Fontes E., Chen E. Y., Pindak R., Meyer R. B., **Smectic-C* to Smectic-A Transition in Variable-Thickness Liquid-Crystal Films: Order-Parameter Measurements and Theory.** Phys Rev L 52(12): 1017-1020, 1984.
- Hong M., Gyorgy E. M., Bacon D. D., **DC Getter Sputtered Amorphous GdCo Films—Magnetic-Anisotropy and In-Depth Chemical Composition.** Appl Phys L 44(7): 706-708, 1984.
- Inoue A., Chen H. S., Krause J. T., Masumoto T., **The Effects of Quench Rate and Cold Drawing on the Structural Relaxation and Young Modulus of an Amorphous Pd_{77.5}Cu₆Si_{16.5} Wire.** J Non-Cryst 61-2(Jan): 949-954, 1984.
- Jayaraman A., **The Diamond-Anvil High-Pressure Cell.** Sci An 250(4): 544+, 1984.
- Jin S., Sherwood R. C., Chin G. Y., Wernick J. H., Bordelon C. M., **Soft Magnetic Properties of a Ferritic Fe-Ni-Cr Alloy.** J Appl Phys 55(6): 2139-2141, 1984.
- Jin S., Vandover R. B., Sherwood R. C., Tiefel T. H., **Magnetic Sensors Using Fe-Cr-Ni Alloys With Square Hysteresis Loops.** J Appl Phys 55(6): 2620-2622, 1984.
- Kammlott G. W., Franey J. P., Graedel T. E., **Atmospheric Sulfidation of Copper Alloys. 1. Brasses and Bronzes.** J Elchem So 131(3): 505-511, 1984.
- Kammlott G. W., Franey J. P., Graedel T. E., **Atmospheric Sulfidation of Copper Alloys. 2. Alloys With Nickel and Tin.** J Elchem So 131(3): 511-515, 1984.
- Klauder J. R. et al., **Quantum-Mechanical Path Integrals With Wiener Measures for All Polynomial Hamiltonians.** Phys Rev L 52(14): 1161-1164, 1984.
- Lam E. et al., **Spectroscopic Characterization of Nitrated Purple Membranes.** Biochem Int 8(2): 217-224, 1984.

- Langer W. D. et al., **Carbon and Oxygen Isotope Fractionation in Dense Interstellar Clouds**. *Astrophys J* 277(2): 5814, 1984.
- Lanzerotti L. J., Medford L. V., **Local Night, Impulsive (P12-Type) Hydromagnetic Wave Polarization at Low Latitudes**. *Planet Spac* 32(2): 135-142, 1984.
- Larson R. G., Monroe K., **The BKZ as an Alternative to the Wagner Model for Fitting Shear and Elongational Flow Data of an LDPE Melt**. *Rheol Act* 23(1): 10-13, 1984.
- Lax M., Odagaki T., **Hopping Conduction From Multiple-Scattering Theory and Continuous-Time Random Walk to the Coherent Medium Approximation**. *AIP Conf Pr* (109): 133-154, 1984.
- Levine B. F., Bethea C. G., **Error Rate Measurement for Single Photon Detection at 1.3 μm** . *Appl Phys L* 44(7): 649-650, 1984.
- Lien S. C., Huang C. C., Goodby J. W., **Heat-Capacity Studies Near the Smectic-A-Smectic-C (-Smectic-C*) Transition in a Racemic (Chiral) Smectic Liquid-Crystal**. *Phys Rev A* 29(3): 1371-1374, 1984.
- Liu P. L., Heritage J. P., Martinez O. E., **Temperature Dependence of the Threshold Current of an InGaAsP Laser Under 130-ps Electrical Pulse Pumping**. *Appl Phys L* 44(4): 370-372, 1984.
- Lucchese R. R., Tully J. C., **Trajectory Studies of Rainbow Scattering From the Reconstructed Si(100) Surface**. *Surf Sci* 137(2-3): 570-594, 1984.
- MacDonald J. R., Feldman L. C., Silverman P. J., Davies J. A., Griffith K., Jackman T. E., Norton P. R., Unertl W. N., **Auger Electron Emission Induced by MeV H⁺ and He⁺ Ions**. *Nucl Instru* 218(1-3): 765-770, 1983.
- Maki A. H., Weers J. G., Hilinski E. F., Milton S. V., Rentzepis P. M., **Time-Resolved Spectroscopy of Intramolecular Energy Transfer in a Rigid Spiran**. *J Chem Phys* 80(6): 2288-2297, 1984.
- Marcuse D., **Microdeformation Losses of Single-Mode Fibers**. *Appl Optics* 23(7): 1082-1091, 1984.
- Ocko B. M., Kortan A. R., Birgeneau R. J., Goodby J. W., **A High-Resolution X-Ray Scattering Study of the Phases and Phase Transitions in N-(4-n-Butyloxybenzylidene)-4-n-Heptylaniline (40.7)**. *J Physique* 45(1): 113-128, 1984.
- Pei S. S., Vandover R. B., **Ion-Beam Oxidation for Josephson Circuit Applications**. *Appl Phys L* 44(7): 703-705, 1984.
- Pfeiffer L., Kovacs T., Di Salvo F. J., **Amplitude of the Charge-Density Waves in 1T-TaSe₂ and 2H-TaSe₂**. *Phys Rev L* 52(8): 687-690, 1984.
- Rabinovich E. M., **Sol-Gel Preparation of Transparent Silica Glass**. *J Non-Cryst* 63(1-2): 155-161, 1984.
- Sacharoff A. C., Westervelt R. M., Bevk J., **Magneto-resistance of Disordered Ultrathin Pt Wires**. *Phys Rev B* 29(4): 1647-1652, 1984.
- Senft D. C., Boyd G. D., Thurston R. N., **Multiplexing the Bistable Boundary-Layer Liquid-Crystal Display**. *Appl Phys L* 44(7): 655-657, 1984.
- Slusky S. E. G., Ballantine J. E., **Effective Mobility Limit in Small-Bubble, Low-Damping-Bubble Materials**. *J Appl Phys* 55(6): 2548-2550, 1984.
- Smith P. W., Ashkin A., Bjorkholm J. E., Eilenberger D. J., **Studies of Self-Focusing Bistable Devices Using Liquid Suspensions of Dielectric Particles**. *Optics Lett* 9(4): 131-133, 1984.
- Stephens P. W. et al., **High-Resolution X-Ray-Scattering Study of the Commensurate-Incommensurate Transition of Monolayer-Kr on Graphite**. *Phys Rev B* 29(6): 3512-3532, 1984.
- Teo B. K., Snyder-Robinson P. A., **Metal Tetrathiolenes. 8. Molecular Structures of Two Isostructural Two-Electron Systems: (Ph₃P)₂(CO)XIr(C₁₀Cl₄S₄) (X = Cl, H). The First Member of a Novel Series of Metal Tetrathiolene Complexes**. *Inorg Chem* 23(1): 32-39, 1984.
- Tiefel T. H., Jin S., **Microduplex Fe-Ni-Mo Semihard Magnet Alloys**. *J Appl Phys* 55(6): 2112-2114, 1984.
- Tu C. W., Sheng T. T., Macrander A. T., Phillips J. M., Guggenheim H. J., **Lattice-Matched Single-Crystalline Dielectric Films (Ba_xSr_{1-x}F₂) on InP (001) Grown by Molecular-Beam Epitaxy**. *J Vac Sci B* 2(1): 24-26, 1984.
- Vanuiter L. G., **An Empirical Relation Fitting the Position in Energy of the Lower D-Band Edge for Eu²⁺ or Ce³⁺ in Various Compounds**. *J Luminesc* 29(1): 1-9, 1984.

- Vonseggern H., West J. E., **Stabilization of Positive Charge in Fluorinated Ethylene Propylene Copolymer.** *J Appl Phys* 55(7): 2754-2757, 1984.
- Wakatani M., Hasegawa A., **A Collisional Drift Wave Description of Plasma Edge Turbulence.** *Phys Fluids* 27(3): 611-618, 1984.
- Walton C. R., Goodby J. W., **Esters That Exhibit Smectic-F to Isotropic Liquid Phase Transitions.** *Molec Cryst* 92(9-10): 263-269, 1984.
- Weber T. A., Stillinger F. H., **The Effect of Density on the Inherent Structure in Liquids.** *J Chem Phys* 80(6): 2742-2746, 1984.
- Weiss M. A., Karplus M., Patel D. J., Sauer R. T., **Solution NMR Studies of Intact Lambda Repressor.** *J Bio Struct* 1(1): 151-157, 1983.
- Weiss M. A., Patel D. J., Sauer R. T., Karplus M., **Two-Dimensional ¹H NMR Study of the λ Operator Site *O_LI*: A Sequential Assignment Strategy and Its Application.** *Proc Natl Acad Sci USA* 81(1): 130-134, 1984.
- White J. C., Craighead H. G., Howard R. E., Jackel L. D., Behringer R. E., Epworth R. W., Henderson D., Sweeney J. E., **Submicron, Vacuum Ultraviolet Contact Lithography With an F₂ Excimer Laser.** *Appl Phys L* 44(1): 22-24, 1984.
- Wood T. H., Burrus C. A., Miller D. A. B., Chemla D. S., Damen T. C., Gossard A. C., Wiegmann W., **High-Speed Optical Modulation With GaAs/GaAlAs Quantum Wells in a *p-i-n* Diode Structure.** *Appl Phys L* 44(1): 16-18, 1984.
- Yafet Y., Vier D. C., Schultz S., **Conduction Electron-Spin Resonance and Relaxation in the Superconducting State.** *J Appl Phys* 55(6): 2022-2024, 1984.
- Yurke B., Denker J. S., **Quantum Network Theory.** *Phys Rev A* 29(3): 1419-1437, 1984.

SOCIAL AND LIFE SCIENCES

- Julesz B., **A Brief Outline of the Texton Theory of Human Vision.** *Trends Neur* 7(2): 41-45, 1984.

SPEECH/ACOUSTICS

- Buschvishniak I. J., **Response of an Edge-Supported Circular Membrane Electret Earphone. 1. Theory.** *J Acoust So* 75(3): 977-989, 1984.
- Buschvishniak I. J., **Response of an Edge-Supported Circular Membrane Electret Earphone. 2. Experimental Results.** *J Acoust So* 75(3): 990-995, 1984.
- Nelson W. L., Perkell J. S., Westbury J. R., **Mandible Movements During Increasingly Rapid Articulations of Single Syllables—Preliminary Observations.** *J Acoust So* 75(3): 945-951, 1984.
- Roberts L. A., Mathews M. V., **Intonation Sensitivity for Traditional and Non-traditional Chords.** *J Acoust So* 75(3): 952-959, 1984.